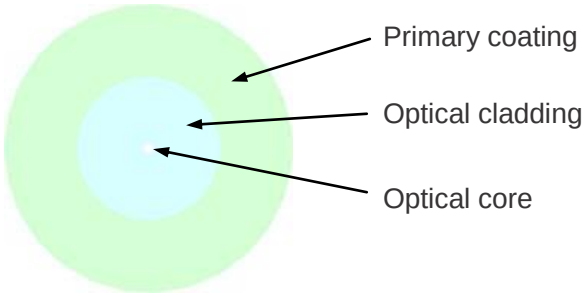
Optical fibre E9/125

Fibre cross section



Application

Singlemode fibre E9/125 with GeO_2 doped SiO_2 silica core, SiO_2 silica cladding, and dual layer UV cured acrylate based primary coating.
This Single mode fibre provides improved performance according to ITU-T G.652.D across the entire 1260 nm to 1625 nm wavelength spectrum due to its low attenuation in 1383 nm, the water-peak region. Bend-insensitive fibres according to ITU-T G.657.A1 feature an optimized waveguide design for excellent macrobending performance.
The fibres can be used in buffered optical fibres and fibre optic cables with transmission wavelength range from 1260nm up to 1625nm.
The geometrical, mechanical and optical specifications are in accordance with all relevant national and international standards.

Standards

DIN EN 60793-2-50;
ISO/IEC 11801Type OS2;
IEC 60793-2-50 B1.3;
IEC 60793-2-50 B6_a1;
ITU-T G.652.D;
ITU-T G.657.A1

Geometrical properties

		@ 1310nm	@1550nm
Mode field diameter			
G.652.D	[µm]	9.2 ± 0.4	10.4 ± 0.5
G.657.A1	[µm]	8.9 ± 0.4	9.8 ± 0.5
Cladding diameter	[µm]	125 ± 0.7	
Primary coating diameter			
natural	[µm]	245 ± 10	
coloured	[µm]	250 ± 15	
Cladding non-circularity	[%]	< 0.7	
Core/cladding concentricity error	[µm]	< 0.5	
Coating/cladding concentricity error	[µm]	< 10	

Mechanical properties

Proof test (1% expansion for 1 s)	[N]	≥8,8 (≙ 100Kpsi)
Operating temperature range	[°C]	-60 bis +85
Coating strip force (typical)	[N]	1,9

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Optical fibre E9/125

Optical transmission properties

	Fibre class								
	Conventional fibres				Bend insensitive fibres				
	OS2 (G.652.D) (IEC 60793-2-50 B1.3)				G.657.A1 (IEC 60793-2-50 B6_a1)				
Zero dispersion wavelength (λ_0) [nm]	1304 ≤ λ_0 ≤ 1322				1304 ≤ λ_0 ≤ 1322				
Polarisation mode dispersion (PMD) [ps/√km]	0,2				0,1				
Dispersion slope (So) [ps/nm^2 *km]	0,092				0,092				
Cut-Off-Wavelength (cabled) (λ_{cc}) [nm]	1260				1260				
Wavelength [nm]	1310	1383	1550	1625	1310	1383	1490	1550	1625
Attenuation max. [dB/km] (cabled fibre)	0,38		0,28		0,36			0,22	
Attenuation max. [dB/km] (cable-free fibre)	0,35	0,31	0,21	0,24	0,35	0,31	0,24	0,21	0,24
Macrobending Loss, bend included attenuation max. [dB]									
100 turns R=25mm								≤0,01	≤0,05
10 turns R=15mm								≤0,2	≤0,5
1 turn R=10mm								≤0,2	≤0,5
Dispersion coefficient max. [ps/nm*km]	3,5		18	22	3,5			18	
Group Index of Refraction	1,470		1,470		1,467			1,468	

Note: *Technical specification are subject to change without notice! All printing errors are subject to correction.*

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